

METHODS FOR USE OF Mpl LIGANDS
WITH PRIMITIVE HUMAN STEM CELLS

Abstract of the Disclosure

Myeloproliferative leukemia receptor (mpl) ligands, such as thrombopoietin, act on a primitive subpopulation of human stem cells having the characteristics of self-renewal and ability to give rise to all hematopoietic cell lineages. Thrombopoietin supports both megakaryocytic differentiation and primitive progenitor cell expansion of CD34⁺ and CD34⁺ sub-populations (CD34⁺Lin⁻, CD34⁺Thy-1⁺Lin⁻, and CD34⁺Lin⁻Rh123^b). Thrombopoietin also stimulated quiescent human stem cells to begin cycling. Thus, mpl ligands are useful for expanding primitive stem cells for restoration of hematopoietic capabilities and for providing modified human stem cells for gene therapy applications.

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